





## USSR AND ITS ALLIES HAVE MORE REASONS TO FEAR AMERICA AND NATO

Berkeley, California. The US government is deceiving the American people seeking to attain a military and strategic superiority over the USSR, said Professor J. Holdren of the University of California, who is Vice-President of the Federation of American Scientists.

Addressing a conference held on the initiative of the organization Physicists for Social Responsibility, he said an analysis of the alignment of strategic nuclear missiles and the overall balance of forces between NATO and the Warsaw Treaty show

that the USSR and its allies have more reasons to fear the United States and NATO than the other way round.

Genuine American interests require a renunciation of the policy of the first nuclear strike, a withdrawal of American nuclear weapons from Europe which has been converted into a powder keg and a future theatre of a "limited" nuclear war, and a freeze on the development, production and deployment of new types of nuclear weapons.



In his elements...

Drawing by Igor Smirnov

## WHAT CAUSED RECENT STREET DISORDERS IN POLISH CITIES

Warsaw. The session of the Polish parliament heard C. Kiszczak, Minister of Internal Affairs, reporting on the street disorders here and a number of other Polish cities on May 3.

Regrettably, said the minister, the groups that were rampant in the streets of some cities, especially in Warsaw, were highly aggressive, and 51 millionaires were wounded, 271 persons were detained in Warsaw. They are the initiators and particularly aggressive violators of peace.

The events, said the minister, were inspired by the enemies of socialism who openly show their inimical attitudes. The outside support which the enemies of socialism receive, the actions of radio Free Europe are no longer just a "slandorous political propaganda". This radio station not

only sends instructions about conspiracy but also details scripts on organizing disorders.

The offensive against our socialist state is dictated in the first place by the fear lest the tension in Poland should subside, while the enemies' chances of influencing the situation in the country grow slimmer. They do not like sensational headlines on Poland disappearing from the Western press. Or it may be that our problems are meant to serve as a screen to put to the background the shameful Palklands conflict or some other colonial actions. Such is the underlying cause of the street disorders in Polish cities. Such is their internal and external mechanism.

## NATO'S FABRICATION

Brussels. NATO Secretary-General J. Luns held a press conference at NATO Headquarters in Brussels to present a new booklet on the alignment of forces between NATO and the Warsaw Treaty. He said the booklet was a result of six months of preparations and that it expressed the views of the 14 NATO countries. Although the document claims to be objective, it is full of tendentious and incorrect statements and figures.

It describes as "measures of containment" forced on NATO the aggressive preparations by the bloc including the decision to deploy new American medium-range nuclear missiles in Europe. It makes no mention of the production of the neutron weapons started in the United States, nor of the expanded manufacture of chemical agents designed to be used in a "limited" war in Europe. Neither do the authors say anything about the commonly known facts about the first-strike capability created by NATO, or

about the adopted by Washington directives immediately in preparation for war in the European theatre.

No more objectivity is there about NATO's assessment of the actual alignment of forces in Europe. Who needs these inventions and the balancing act with figures? It is easy to answer this question, NATO is seriously worried by the growing resistance in Europe and the United States to NATO's insane plans. The scale of the anti-war protest and the public demand that the dangerous arms race should be abandoned and that reductions in nuclear arsenals should be really started have become a serious obstacle for the militarists. In order to scale down the wave of the protests NATO has decided to undertake this propaganda operation and to produce the fabrications about the "defenceless" alliance and the "Soviet threat" hanging over Europe.

## PALESTINIANS FIGHT ON

Beirut. Reports coming from the West Bank and the Gaza Strip say that the Palestinians there are continuing their struggle despite the campaign of terror and reprisals. The WAPA news agency says that massive anti-Israeli demonstrations took place some days ago in Nabulus, Ramallah and other cities.

This wave of protests has been caused by the decision of the Israeli Knesset to stop dismantling Israeli settlements on the West Bank and in the Gaza Strip. This act of blatant violation of international law testifies to Tel Aviv's plans to perpetuate its control of the occupied Arab territories in defiance of the international protests.

## BATTLE IN MORAZAN

San Salvador. The troops of the pro-American puppet regime have suffered a major defeat in the department of Morazan where they tried to destroy a large group of insurgents. According to the Venceremos guerrilla radio, the junta lost 211 men either killed or severely wounded and large quantities of military equipment.

## 'AID PROGRAMME' CONDEMNED

Tripoli. Participants of the African economy and planning ministerial conference here have condemned the "aid programme" prepared by the World Bank for the "development of African countries south of the Sahara". The aim of the programme, which was prepared in Washington and reflects the interests of the imperialist states, consists in dividing artificially African countries according to a geographical criterion and in creating more barriers in the way of establishing close cooperation between the states of the continent, says a special declaration adopted by the conference.

One of the top priority tasks was seen by the conference to be the need for an elaboration and adoption of a single economic strategy, preparation of joint development programmes, coordination of plans in economy, science, technology and trade, building joint projects, wider use of own resources.

## ITALY: CHRISTIAN DEMOCRATS ELECT NEW LEADER

Rome. Reuter-TASS. The Italian Christian Democratic Party elected a new leader in an effort to reassert its dominant position in the country's post-war politics. Ciriaco de Mita, 54, a lawyer from the Naples hinterland, was elected to the powerful post of party secretary with the solid support of left-wing and centrist party factions at the Christian Democratic Party congress in Rome.

Like other party secretaries in Italian politics, de Mita will play no direct role in government but will have the decisive voice in party policy and appointments. Political analysts said his election resulted from a compromise between the party's left and right wings, who were divided over the party's role in Italian politics.

## V-Day commemorated

"The Great Patriotic War as seen by photographers and artists" is on view now in the Exhibition Hall of the Moscow Joint Committee of graphic artists at 28 Malaya Gruzinskaya St. It features over 200 items by major Soviet war photo reporters and works by budding photo and graphic artists. Many of them are well known to viewers in the country and abroad, reflecting the unmatched exploit of the Soviet people in their struggle with fascism. They also captured scenes from the life of war veterans.

Alexander GERINAS



Yevgeny Ildelf. "At the Potsdam Conference. Stalin, Truman and Churchill".



Mark Redkin. "The Banner of Victory". "The End".

## FACTS AND EVENTS

© A nationwide opinion poll sponsored by "The Washington Post" and the ABC television network has shown that 71 per cent of all Americans favour freezing nuclear arsenals.

© For the first time after ten years, a meeting has been held by the Franco-Israeli Economic Commission. The decision to resume the activities of the commission, suspended on the initiative of France in protest against the Israeli government's policies, was taken during the recent visit by President F. Mitterrand to Israel.

© It costs the Japanese taxpayers one thousand million dollars a year to maintain the American troops and bases in Japan, the newspaper "Mainichi" reports.

## CIA and the 'yellow rain' in Indochina

Bangkok. The local press carries the story of American Scott Barnes who was sent to Laos by American secret services. Barnes said that the CIA had prepared an operation for secret penetration of agents into the territories of Laos and Kampuchea. The tasks of the first group of agents included bringing to Indochina and spreading the chemical "yellow rain" in order to supply "material evidence" of use of poisonous agents by the Soviet Union and Vietnam, US-made chemicals were taken for the purpose.

It was decided to kill the "yellow rain" distributors so that the criminal operation remained secret. The CIA equipped a

second "expedition" for this, the one which included Barnes. Last October the group mainly consisting of Mao tribesmen crossed the Mekong River into Laos. They were sent by former Laotian general Vang Pao who helped the USA in their aggression in Indochina.

After having crossed into the Laotian territory the agents, however, refused to carry out their orders. Washington's unseemly act has become publicly known.

## Jadeite wars

More than four thousand years ago, Chinese emperors began to decorate their palaces with works of art made of jadeite, a stone mined in the jungles in the north of Burma. Conchoidal regarded it as the symbol of the best human qualities.

Today, blood is shed over jadeite quarried in the notorious Golden Triangle where there are bases of the pro-Peking separatist and remnants of the Kuomintang troops thrown out of China. Frequent wars between these gangs are now fought not only over opium but also over jadeite.

Part of jadeite is smuggled into China, say rebels from the so-called "Kachin" Independence Army who have surrendered to the Burmese authorities, an Associated Press correspondent reports from Rangoon.

Jadeite is of course not used to decorate new buildings in Peking. Indeed, they are sold on international markets including Hong Kong. The money paid for them is spent to maintain pro-Peking splinter groups in South-East Asia.

## FROM THE SOVIET PRESS

### WHO UNCHAINED THE BRITISH TASK FORCE?

For three weeks, Washington was trying to secure freedom of action for itself in the South Atlantic in the process of the so-called peace initiative by Secretary of State Haig, writes Yuri Bantura in IZVESTIA. When it became clear that Buenos Aires did not want to make a deal at the terms proposed by Washington and London, the British task force poised for attack off the Falkland Islands (Islas Malvinas) was let loose. Buenos Aires has shown no desire to yield to pressure either in the creation of NATO, or in the issue of sovereignty over the Falkland Islands (Malvinas), the author notes. On its part, London has offered the Pentagon a right to set up a base on the Ascension Island and has handed over to Washington the island of Diego Garcia, which it wrested from Mauritius for the Americans to build a strategic military base there. Therefore, Washington is confident that if Britain will back the Falkland Islands (Malvinas) from Argentina, London would be ready to "concede" the islands to the Pentagon.

### WHO KILLED PIO LA TORRE?

Mafia carried out an order from without, writes V. Agayev in KOMSOMOLSKAYA PRAVDA concerning the killing in Palermo of Pio La Torre, member of the Italian Communist Party's leadership and member of parliament. Being a member of a parliamentary commission investigating Mafia activity in Sicily, writes Agayev, Pio La Torre had done much in this field. Mafia had enough reasons to do away with him. But why now? The mass campaign conducted by Italians protesting over plans to turn Sicily into a launching pad for new American missiles has been getting recently on the nerves of NATO generals and politicians, writes the author. Pio La Torre was one of the leaders of the campaign. This is it—he stood not only in Malta's way!

Whole volumes have already been written about Mafia connections with the CIA as well as the right extremists on the left-wing organizations in Italy. Even former CIA chief William Colby admitted to a US Congress commission investigating CIA activities that his agency entertains relations with Mafia for "operational purposes". Isn't the killing of Pio La Torre one of such "orders"?

### ON ORDERS OF WAR BUSINESS

The information and propaganda service of the NATO Brussels headquarters is becoming increasingly prominent in the coordination of joint action by the Western press, especially as regards ideological sabotage against socialism, writes Yu. Nolin in the SOVSOLISTICHESKAYA INDUSTRIYA newspaper. It is precisely this centre which, prompted by the CIA and the military-industrial complexes, is manufacturing more "false" news for the Western media for propaganda attacks against the USSR and other socialist countries and in fanning military psychosis.

The function of the "Soviet threat" myth is to give free reign to the military-industrial complex and throw up artificial barriers to settling the arms limitation issue. This is a social order by military business to the dependent media, the article emphasizes.

### GROWING THREAT IN THE MIDDLE EAST

Tel Aviv is making open preparations for a big war, writes Vitaly Kobayev in LITERATURNAYA GAZETA. An attack against South Lebanon is to be its first stage, and, far from being concealed, it is even advertised.

Having solved nothing, the Camp David process, whose momentum has been spent, has created an even more dangerous situation which imperialism, with help from Israel, intends to manage of its own — and nobody else's — discretion. The Middle East has been brought to a state of a still greater tension and to the threshold of a war whose consequences can become tragic for the whole world, remarks the author.

We do not conceal, the paper stresses, that we view these irresponsible policies pursued by the United States and Israel as a direct threat to our own country, whose southern borders and the borders of the nearest states in the region are at no more than 200 to 300 kilometres. What the strategists in Washington see as part of their geopolitical game is an encroachment on the peace and security of the peoples of the Soviet Union and its nearest neighbours. Neither do we intend to take an indifferent view of a bonfire of war being started in this area and whole nations becoming victims to violence verging on genocide perpetrated there along with a murder of common sense. This sense we have not lost.

## Science and technology

### 'GLASS' BRIDGE

The first "glass" bridge in the world has been designed in Bulgaria to link both banks of the Nisave River. Its spans are made of superstrong fibre glass plastic. During tests, the model of the bridge withstood a load of 1,200 tonnes.

### BIG COLLECTION

There are 100 and a half million sheets with samples of plants in the herbarium collected by the Friedrich Schiller University in Jena. It is the biggest botanical collection in the GDR. It contains samples of plants from all the continents which is of great help

## REPLACES CLERKS

A recently designed computer can replace a great number of employees at hotels, writes the "Jeune Afrique" magazine. The computer can make a reservation of a hotel room, take orders for serving guests in their rooms, answer numerous questions from the guests and write out bills for the services rendered.

## MALARIA STILL DANGEROUS

Malaria is still widely spread in the tropics. The problem of its treatment and prevention is the topic for investigation by scientists from Papua New Guinea and Australia who intend to develop immunity against the disease in humans. The magazine "The Pacific Islands" writes that their publisher already has evidence. Nevertheless, it will take about ten years more before their work is completed.

## POWERFUL ROBOT

The British firm of Lamberton is to design a robot for steel works and other industries, writes "The New Scientist" of London. It will be able to hold and move objects weighing up to 4.5 tonnes. It is to be one of the most powerful industrial robots in the world.

## VIEWPOINT

## NUCLEAR DISARMAMENT: REAL AND FALSE AVENUES

Two opposite approaches to nuclear disarmament have now crystallized in the current international discussion. The proponents of one of them argue that there are more than enough nuclear weapons in storage today to exterminate all life on this planet, which naturally makes nuclear war a nonsensical and fatal proposition for any country and people against which such weapons might be used.

The other approach advocated by Washington emphasizes the "insufficiency" of American nuclear potential and calls for either new ambitious programmes for boosting its potential or unilateral Soviet disarmament.

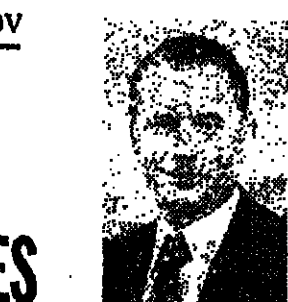
The Soviet Union shares the anxiety of the world public opinion over continued rampant arms race and says it is ready to reach the most radical agreements to this end with other nations. Confirming this stand, Leonid Brezhnev stressed the other day that none other than the USSR has repeatedly proposed setting up nuclear-free zones and ridding Europe of both medium-range and tactical nuclear weapons. But Moscow stresses in this respect that there are things that just cannot be substituted for one another. Concerning,

say, the real rather than false "zero option" in Europe, it must be made clear that this should be achieved through mutual drastic zero-level reductions rather than through some "dual solutions" based on double standards, i.e. acquiring unilateral advantages at the expense of the Soviet Union's security.

Compliance with the principles of parity and equal security are central to any stage of limitation and curtailments of armaments. Assuming this is an axiom, it is henceforth indisputable that the sides involved must be at one in viewing the unleashing of nuclear war as plain inconceivable and reliance on achievement of nuclear arms superiority as sheer madness.

But the very conduct of US politicians and strategists leads people to strongly suspect that they are covertly working to achieve such superiority whatever the price. Significantly, former US ambassador to the USSR Thomas W. Watson admitted recently that he and other American experts on relations with the Soviet Union have helped themselves "viciously" to the nuclear superiority as the critical guarantee of security.

This is strikingly indicative of



Spartak BEGLOV

the ingrained reluctance within the US power structure to acknowledge parity with the Soviet Union and to proceed from parity, i.e. respect of equality and equal security for the other side, in its talks with the USSR.

There is now more talk in this respect in the USA about the ill-fated SALT-2 treaty, specifically about its advantages. Several leading columnists with influential local papers, Senator Gary Hart, Representative Les Aspin and others recently came out in support of the treaty. As Les Aspin pointed out, the treaty might be instrumental in achieving far more than simple freezing of weapons.

Looking back with regret, sensible Americans also find something to reproach themselves with: indeed, two and a half years ago the treaty was being picked to pieces by the "hawks", the US public opinion kept silence.

But who is primarily responsible for the missed opportunity? Precisely those American strategists averse to the idea that according to the SALT agreements the USA would have to recognize the need for dealing with the USSR on an equal footing. Today, in midnight Washington is keen to justify

its refusal to ratify the SALT-2 treaty by alleging US inferiority in arms vis-a-vis the USSR. But the important thing is that the treaty was specifically meant to deprive either side of any advantages. Leonid Brezhnev declared late last year that since the signing of the treaty in 1979 the Soviet Union made no changes in its strategic arms to alter the rough parity that had been achieved. The White House and the Pentagon are well aware of this and still are rushing ahead with fresh military programmes.

All this holds the US ruling circles doubly responsible for wrecking the SALT-2 treaty and for giving a new twist to the nuclear arms race.

One can arrive at the following conclusion in seeking the way out of the Washington-created deadlock and a halt to the arms race. That freezing of nuclear arsenals is now as urgent as never before and that neither the freezing nor (and even more so) reduction of these arsenals is possible without fundamental agreement specifying parity and the balance of both sides' interests and consequently clearing the way for further joint moves to cut back armaments.

For all sensible people the restoration of the SALT process is an imperative. As regards the Soviet Union, it has consistently upheld an immediate resumption of the SALT talks to preserve all the positive aspects of the SALT-2 treaty and has equally advocated real limitation on curtailment of armaments on the basis of parity and equal security. What is needed is business-like and level-headed negotiations rather than cheap propaganda.



## Round the Soviet Union

● "1,500th ANNIVERSARY OF KIEV" IS THE NAME OF A HIGH-POWERED OCEANOGRAPHIC TRAWLER LAUNCHED OF THE KIEV LENINSKAYA KUZNETSA SHIPYARDS. The ship will be used by Kaliningrad fishermen.

● THE CHERKESK CHEMICAL WORKS IN THE NORTH-EASTERN CAUCASUS IS PHASING IN A NEW ENAMEL, VPE-1179, WHICH IS VERY EASY TO USE. Unlike all other enamels requiring various organic and synthetic solvents, the new enamel mixes well with water.

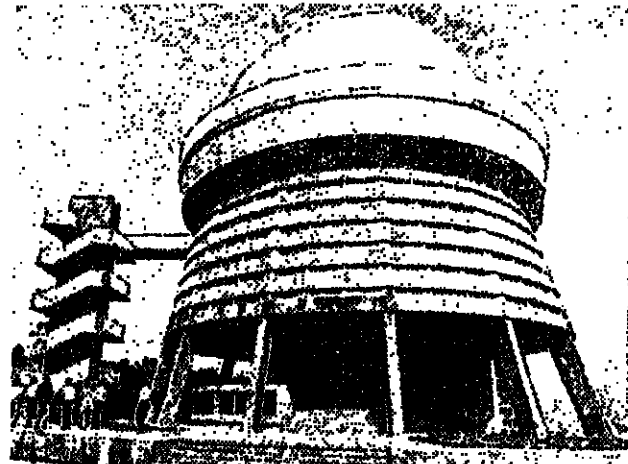
● ENVIRONMENTALISTS FROM MOSCOW, LENINGRAD AND OTHER CITIES OF THIS COUNTRY WILL HELP SOLVING THE PROBLEM OF ENVIRONMENTAL PROTECTION IN THE GEORGIAN CAPITAL OF TBILISI. They have visited Tbilisi's largest enterprises which they patronize. Leading experts were invited from the fraternal republics by the Coordination Council created at the Tbilisi City Council of People's Deputies. Contracts have been signed providing for modern pollution-control equipment at the city's enterprises.

● FINE-FIBRE COTTON SOWING HAS BEEN FINISHED IN UZBEKISTAN. Its plantations were farther to the republic's south, taking another four thousand hectares of recently reclaimed lands in the Surkhan-Sherabd steppe.

● A MUSEUM OF SAMOVAR MANUFACTURING WILL BE ORGANIZED IN TULA, the city of armours which is also long since been known as the city of samovar-makers.

● AN EXHIBITION WHICH HAS OPENED IN TBILISI FEATURES THE ART OF SHOTA AND MARGARITA METREVELI, WHO ARE BOTH MERITED ARTISTS OF THE GEORGIAN REPUBLIC. The two artists took a journey across the Soviet Union bringing back nearly two hundred paintings, portraits and graphic sheets now on display in the Georgian capital. They show landmarks of the great road travelled by the fraternal peoples of the Soviet Union in the fifty historical years. Their exhibition is the first in the series of exhibitions "Strong by Their Friendship" to be held by the Union of Georgian Artists to mark the 50th anniversary of the Soviet Union.

In our age of space flights it would not be an exaggeration to say that ground-based telescopes continue to play an immense role in the exploration of the Universe. Some of the discoveries have shattered the elegant picture that for a long time seemed unshakable to many people. It has been established, for instance, that the metagalaxy—the aggregation of all the observable galaxies—is expanding at a tremendous speed doubling in volume every ten thousand million years. Astronomers predicted the existence of dying stars and then discovered them. Neutron stars have been found with their atmospheres emitting radio waves. Since these stars spin very quickly, their radio waves reach



The telescope at the Byurakan observatory.

## BYURAKAN STARS

as pulses giving them their name of pulsars. At first, some of these signals received on the Earth were attributed to extraterrestrial civilizations.

Much progress in the study of early stages in the life of stars has been made by the astronomers at the Byurakan Astrophysical observatory in Armenia. They have established, for example, that overwhelming majority of the new stars go through a stage of "flaring star" at their early existence. Hundreds of

such stars have been discovered. The observatory has a powerful telescope with a 2.6 metre mirror. It is the second largest telescope in Europe after the BTA optical telescope recently built in this country and provided with a mirror of six metres in diameter.

Much information about the secrets of the Universe has been brought by cosmic rays. The Aragats station in Armenia has many intricate instruments to register cosmic rays.

The computer station registering cosmic rays on the mountain of Aragats.

## Better turbines for nuclear projects

Faced with the task of reducing the construction time and weight of the turbines intended for 1 million kilowatt power generation units to be installed at nuclear power projects, the Leningradsky Metalloshchety Zavod works has developed and started full-scale production of turbines meeting the above requirements.

Previously the works manufactured only "slow" 1,500 rpm turbines which were metal extensive and incorporated parts weighing up to 200 tonnes. To assemble these turbines on site was not an easy task.

The new turbines rotate twice as fast, while their weight was reduced by 1.5-fold. Steam 800 MW turbines which had proved their worth were used as the pilot unit.

## Northern houses becoming warmer

Vakation construction materials factories have been receiving diopside which is used to make mineral cotton—a heat insulation material intended for houses in the Far North. Geologists did not have to look for diopside. They take it from the waste bank of a local mica factory. It used to be dumped before. Now they learned to take it from wastes at the Emel'nyuk mica mines.

The use of diopside for mineral cotton is a cost saving solution, since previously it was brought from other regions.

UEW-4, a device for electric water activation manufactured by the Kokand Bolshhevik factory (Central Asia) has performed well in various gas fields of the country. The unit has been designed for electrostatic processing of mineral and sea waters used by gasmen to prepare drilling solutions. It desalinates as much as 20 cubic metres of water per hour saving a lot of caustic soda and other costly agents. The sphere of the unit's use is rather wide: in the cement industry, medicine, agriculture and other industries. Experiments show that cement prepared with the electrically activated water is 20 to 25 per cent stronger than its conventional counterpart.

## CANAL IN A PIPE

The main bed of the famous Karakum Canal which extends for 1,100 kilometres across the Karakum Desert has recently been completed on the territory of Turkmenia. The canal will further go in two directions. Its western branch, in pipes will go to Kazakhdzhik, Nohit-Dag and further to Krasnovodsk to provide water for over 20 settlements in Turkmenia's most arid area. The southern branch will rich the subtropical area to water over half a million hectares. At present, only 600 hectares in this area are used, especially to grow pomegranates. Watered pastures will also be arranged in this region to provide fodder for karakum breeding farms.

## A SCIENTIST NEEDS A HEIGHTENED SENSE OF SEARCH

What makes the scientist's social image? This question of a PRAVDA correspondent is answered by Konstantin Sytnik, Vice-President of the Ukrainian Academy of Sciences and Director of the Institute of Botany. I think that the scientist should be wedded to his or her job, be ready to spare not a single effort in the development of science, writes the Academician. The main feature of our profession is the continuous quest of the new truth no one knows when or where he runs into an idea which captivates him for many years. But meanwhile he should continue his search, which often becomes an everyday routine. There is no personal or team success without this.

## IS THE EARTH GETTING SLIMMER?

The world annually produces vast amount of coal, oil and gas, which are used as energy fuels—but does it affect the planet's weight? An answer to this question is given in "VESTI" by V. Sazonov, Doctor of Sciences (Phys. and Math.), head of the Earth-and-planets origin and early evolution section at the O. Schmidt Institute of Earth Physics of the USSR Academy of Sciences. He argues that the Earth's mass does not dwindle, since the combustion products remain in the atmosphere, leaving intact the mass preservation law of the great Russian scientist Lomonosov. Still there are factors, slightly affecting the Earth's weight.

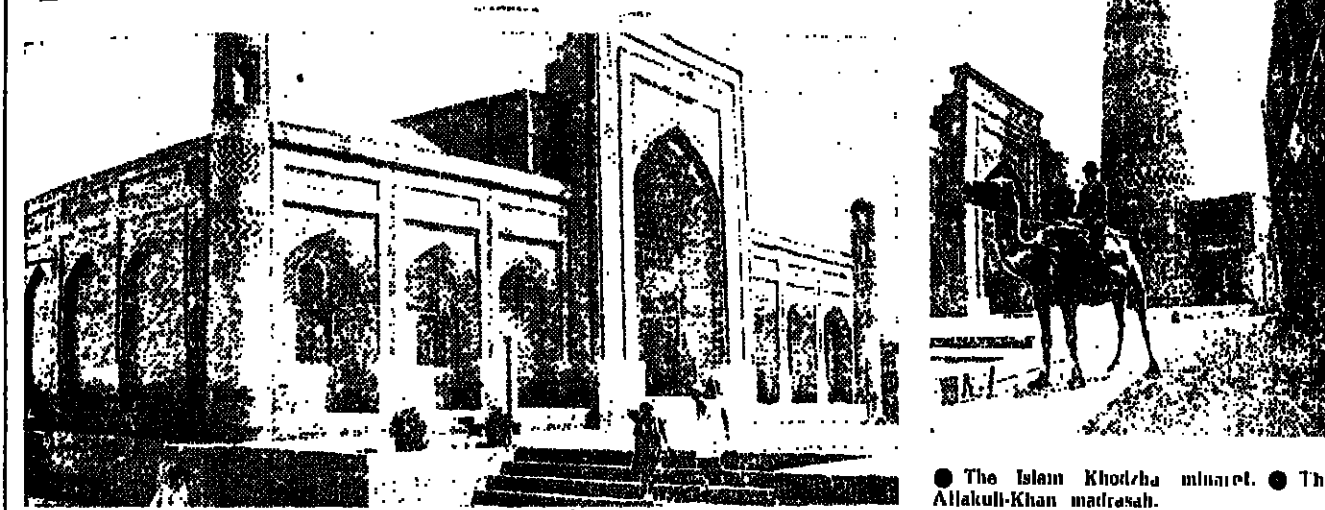
The Earth is the recipient of a large amount of small interplanetary particles—disintegrated asteroids—of which we know over 2,000, and which move in space between the Mars and the Jupiter orbits. In just one day the Earth collects hundreds of tonnes of small space bodies and dust, but big as such figures might seem on the face of it, they are negligibly small compared with the mass of our planet and are unable to produce any significant influence on the Earth's revolution around the axis or its distance from the Sun or on our everyday life.

## EDUCATIVE FORCE OF EXAMPLE

The teenager is made so, writes in KOMSOMOLSKAYA PRAVDA S. Shmakov, Cand. of Sci. (Ped.), that, similarly to a vitamin-deficient human organism in March, he needs explosive, highly impressive activity which would promise him both self-assertion and the recognition of his peers and adults. Any other price which requires permanent, real (not game) efforts, pays the teenagers in a special kind of toughness and belief in their own capabilities. In general, this happens gradually but, like crystal growth. The teenager's emotional nature is particularly susceptible to collective, creative deeds with a high demonstration effect in the course of which the process of educating through the mood goes on. They like the methods of improvising, competition, risky games and do not like the method of repetition where every minute detail is repeated in the name of formal orderliness. It is deeds that are required in education in our time. One should invent and every day even without words make a small tide out of every new day for the teenager, concludes the author.

## Places to visit

## A TOWN FROM 'THE ARABIAN NIGHTS'



● The Khan Khattai minaret. ● The Ak-Kul-Khan madrasah.

Historians, art critics, architects and sociologists often refer to a so-called "museum explosion" as symptomatic of people's growing interest in history, archaeology and daily life of our ancestors.

New museums are being set up, the existing ones get expanded, conservation zones are being set aside in towns, and not infrequently entire towns are given museum status.

Khiva is a town on a par with such Central Asian celebrities as Samarkand, Bukhara, Kunt-Urgench.

It is located in the Uzbek republic in the sun-drenched Khorezm oasis. As early as the 10th century Arab scholars referred to it as

a place of fairly large significance, while the town itself had been founded much earlier. According to archaeologists, it was the centre of an original culture as far back as the 6th-8th centuries.

The grey-yellow mass of Ichan-Kala, the earliest part of the town, is girded by sturdy fortress walls. A section of the palace-fortress, its reception hall and the summer mosque fitted out with bright tiles, have survived the ravages of time.

Visitors to Khiva show much interest in the Sayid Alauddin mausoleum, a remnant of the Mongol rule times, the Pakhlavan-Makhmud mausoleum, the Kaitandor minaret, and, finally, the "Stone Palace" complex with innumerable rooms.

## Science and technology

## PLANTS HELPING PROSPECTORS

Scientists at Kharkov University have found plants useful in the search for mineral deposits. In cooperation with specialists from Moscow they have developed the so-called phytochemical method in prospecting for oil and gas.

They have discovered that trees, bushes and grasses growing above oil and gas deposits have leaves and needles with a higher content of some microelements. These microscopic particles are carried onto the surface from the layers saturated with oil by currents of hydrocarbons. Being absorbed by plants, these elements increase their iron, copper, titanium and calcium content. The new method has been tested in Siberia. By combining it with the traditional methods of prospecting, one can have a more precise idea about the area of the deposit and dispense with some very costly drilling exploration rigs.

## POWERFUL HAY BAILING PRESS

A compact bale of hay can be gathered in two and a half minutes by a new powerful hay baling press which has been designed in Kirghizia. Recent tests have shown that the powerful machine combines speed with the high quality of the hay it bales.

Designed at the Research and Design Institute of Forage Harvesters in Frunze, the press is one in a series of machines which provide for complex mechanization of forage harvesting. Kirghiz Industries have used the blueprint drawn up at the Institute to start commercial manufacture of "mowers" and "mowers" which gather and cut grass and hay. The new machine will be put into production in 1976.

## POLYMERS WITH IRON PROPERTIES

New polymers, which are as strong as steel, have been developed by scientists at the Institute of Polymer Chemistry of the USSR Academy of Sciences. The polymers are called "polymer-iron" and "polymer-steel". They have the same properties as iron and steel, but are much lighter and more resistant to corrosion. They will be used in the construction of bridges, ships, and other large structures.

## TARTU UNIVERSITY THEATRE

The Tartu University Theatre was written by G. Kalamata, head of the USSR History Faculty. University professors and museum staff as well as citizens of Tartu contributed towards the production. They provided the students with period costumes, effects and stage uniforms as well as with old prints.

## VIEWPOINT

## GEORGIA'S PLACE ON THE COUNTRY'S ECONOMIC MAP

Valerian VADACHKORIA, Deputy Chairman of the Council of Ministers of the Georgian SSR

The Georgian SSR—though small in area (about 70,000 square kilometres) and population (over 3 million) occupies sixth place in the country in terms of its gross national product. Georgia produces aircraft and electric locomotives, hydro-falls and heavy lorries, computers and electrotechnical instruments, lathes and steel pipes, as well as tea, tung-oil and the citrus fruit. It is a major producer of wine, fruit, vegetables and tobacco. About 40 per cent of its aggregate product is consumed in the rest of the country or goes abroad.

There were periods of relatively slow development in Georgia's economic life. In the 1930s, for example, it lagged behind the all-Union level in growth rates for the gross product, national income and labour productivity.

Over the past decade quite a different picture has emerged. During this period more than 500 industrial enterprises were built or modernized in Georgia. But it is so much a question of growing economic potential as of the way it is used. While in 1970 the republic was 17 per cent behind the all-Union figure in such an important economic indicator as return on investments, by 1980 it had overtaken this figure. In agriculture every hectare of land in Georgia today yields twice the amount of the average figure taken for the country as a whole. Of course, much of this success can be explained by fertile soil and favourable climate, yet it was not so very long ago that these lands did not bring in such good harvests.

The per capita national income has grown by 39 per cent; labour productivity by 27.2 per cent. The volume of the aggregate social product has grown by more than 40 per cent. Over 300 new industrial products have gone into production.

The following factors provide some indication of the technical level of Georgia's industry: there are now more than 1,500 totally mechanized and automated plants in operation in the republic. Over recent years, robots have begun to be used in production.

For a long time the fuel and energy basis was a weak point in Georgia's economy. Now this state of affairs is changing. The Inguri hydroelectric power station with capacity of 1.3 million kW and the commissioning of the power units at the Vashkizhskaya station have solved the power supply problem. Georgia's industrial and agricultural production has been diversified. The republic has a large number of enterprises which produce goods for export.

Georgia's scientific progress is getting out of the narrow bounds of the republic. The republic is now an important part of the country's scientific and technical base. More than 100,000 specialists have been trained by Georgia's higher education system.

## FROM the SOVIET PRESS

### RAISING THE EFFICIENCY OF WORK

Profound changes in production, particularly mechanization and automation, demand that management be responsible and the workmanship in many areas be higher, writes the SOVIETSKAYA ROSSIYA newspaper. A trade-off between the human and the machine factor is the main task of the modern production management. One of the aims for the current decade consists in improving the working conditions, making a considerable progress in removing the difference between intellectual and physical activity. This task is tackled in the first place by means of advanced machinery and technological processes. Operations research is no less important in this respect though less expensive. Managerial innovations in industry provide for one-third of the labour productivity growth, saving 400,000 jobs every year.

Life shows that production management has become more sophisticated. This is understandable since ten years ago to raise the efficiency it was sufficient to introduce a more reasonable layout or to improve the lighting, but now the task is not that simple. Modern production management requires a comprehensive approach accounting for all the sides of the entire process.

Advanced management techniques will cover 45 per cent of the total jobs during the current five-year plan, saving nearly four million hands as a result, needed in other industries.

## OF INTEREST



Between you and me.

INFORMATION No. 30, 1972

Handwritten signature or note.



## Theatre, Cinema and TV Stars

## Stanislav LYUBSHIN



Lyubshin has had an astonishing career as an actor, a career in which chance has played a very small role. On the contrary, Lyubshin would appear to have been the complete master of his fate. Dedication, hard work, a highly serious attitude to his calling and unwillingness to compromise combined to enable him to forgo ahead in the acting profession.

Neither his adolescent background, he came from a family of state farm workers, nor the environment of a village outside Moscow, nor the post-war period were propitious to artistic pursuits. Nevertheless at the age of 22, having been to vocational and then technical school and having a stint in the army behind him, he resolved to enter drama college. Among people straight from school, he felt his age and he had to work nights as a welder at a construction site to support a family—he already was a married man by this time.

His appearance in the graduation play, "An Optimistic Tragedy", by Vsevolod Vishnevsky, brought him invitations from 27 theatres across the land. He opted for the Sovremennik, which in those years was both standard-bearer and mouthpiece for the age.

...In his 20 years in cinema and theatre

Lyubshin has never given a mediocre performance—all the parts he has played have been highlighted by a conscientious approach, good taste, talent and high quality. But this generally high level of performance still had its peaks which were normally preceded by sweeping changes in the actor's career. The first such peak was Lyubshin's performance of the part of one of three heroes in the once much-loved film, "I Am Twenty", by Marlen Khutsiyev. In the same way as did the Sovremennik Theatre the film and its characters reflected the spirit of renewal which swept this country in the late 50s. Lyubshin's performance won him popularity and the appreciation of film makers and their audiences. Another summit was the part of a Soviet intelligence officer in the serial, "The Shield and the Sword".

After several successes Lyubshin showed he could actually shape his own fate by rejecting the offer of the lead in a 13-part TV serial by a noted director for the sake of the small, and to him new, role of a contemporary educated rascal in a film, "Defence Attorney", made by an unknown director. At another point in his career, he chose to stay away from films to concentrate on his best role in the theatre, that of the "hero of our time" in Alexander Vampilov's "Last Summer in Chulimsk". Later he was to abandon the theatre to make a film based on Vasily Shukshin's "Call Me Into the Bright Distance", and to make a brilliant appearance in it in another one of his "negative" parts. He produces and acts Chekhov on TV, plays Tariff in the Moscow Art Theatre, and excels in the film, "Five Evenings", which won him an award for the best male part at an international film show in France.

Lyubshin has many spectacular assets—he is a stupendous character actor, a connoisseur of Russian classics and a natural for psychological intrigue. Well-known playwrights produce plays with him in mind either as actor or director, top directors dream of having him in their productions. From time to time he abandons the theatre for films, and yet any of Moscow's leading theatres would be glad to recruit him due to the simple fact that Lyubshin has made his mark both as an outstanding talent and as a great personality, a highly cherished combination in art.

Tatyana SAVITSKAYA

## Oberhausen awards

The Soviet film, "The Earth's Mother", by Georgian director G. Chikhieli has won the top award at the 28th International Short Film Festival in Oberhausen. Another Soviet entry, "Offered for Scrap", by director I. Gershtein (Kirghizia Studio) got the "Juryfilm" prize of the jury.

Taking part were 30 countries in Europe, America, Asia and Africa. With 114 feature and documentary films entered in the competition.

The first performance of the "Love, Xosomol and Spring" programme has taken place in the Moscow Circus on Tevetnol Boulevard. It was produced by Vladimir Krymko who engaged in the programme the youngest and most talented circus performers of the country. The arena of the old circus features air gymnasts Valery and Yuri Panteleyenko, juggler Jan Poldi on a motorcycle, young balances directed by Vladimir Ushakov, and many others. Vitaly Tikhonov performs with a group of exotic animals. Clown Yuri Kvitchachov and his trained assistants entertain the audience the whole night through.



● The "Belovozhskaya Pytcha" number presented by Vitaly Tikhonov. ● Juggler Jan Poldi on motorcycle. Photos by Yuri Bykovsky

## IT'S CHEKHOV AGAIN

The Bolshoi Drama Theatre in Leningrad has had the first-night performance of Chekhov's "Uncle Vanya" staged by Georgi Tovstonogov.

We wish to reveal in this play by the great Russian writer the active nature of Chekhov's dramas and to avoid sentimentality. During the rehearsals we clearly saw on many occasions that the more strictly and sharply Chekhov is interpreted, the more clearly appears his

humanity and compassion, says Tovstonogov. Seventeen years ago art director Tovstonogov staged another play by Chekhov at the Leningrad Bolshoi Drama Theatre, "The Three Sisters". Several actors now playing in "Uncle Vanya" were also engaged in that play. Voinitsky is played by Oleg Basilashvili. The other main parts are played by Kirill Lavrov, Yevgeny Lobodov, and Larina Malevannaya.



## GUEST PERFORMANCES IN MAY

An important event in the cultural life of the country will be the Days of Bulgarian Culture in the USSR, marking the centenary of Georgi Dimitrov. The Days due to begin in Moscow on May 24, as well as in other Soviet cities, will be attended by popular Bulgarian performers and companies.

The Finnish National Opera will for the first time be appearing in Moscow, Leningrad and Tallinn with a programme featuring

ing Verdi's "Macbeth" and A. Sullivan's "The Red Line".

The Tempore classical quartet's arrival in the USSR, he timed to coincide with opening of the "Mexican Architecture" exhibition in Moscow.

Among other visitors will be variety performers and groups from Sweden, Turkey, Argentina, Hungary, Cuba, Yugoslavia, Japan, arriving in our cities in May.

## Japanese tour of Tajik singer

Dzhurabek Murodov, a singer from Tajikistan (a Central Asian republic), will start his guest performances in Japan by the popular Soviet song "Kaliushka". Dzhurabek Murodov, a soloist of the Tajik Philharmonic Society,

who has an excessively full voice, will tour 10 Japanese cities together with the six-piece group "Zanabek" (carriers) during this month. The group's repertoire includes folk songs and dances.

## FILMS FOR CHILDREN

A nationwide children's films week opening in this country on May 14 will feature over 200 pictures, among them those freshly shot at film studios in Moscow, Leningrad, and Union republics, as well as Soviet film classics.

The list will include films that fetched awards from the 15th nationwide film festival like

"Short Is the Night", "Aurora the Small", and "Hills (hilltop)", telling of a lot in World War II. As view will be fairy tale adaptations of works of children of varying ages. It also includes a number of children's favourite actors, and film directors.

One of the most recent able events in the Days of Literature and the Arts in Yakutia is the exhibition of Yakutian painters which has opened in the Central House of the Artist at 14/10 Krysinskaya Embankment in Moscow where more than 300 items of 70 artists are on display. The paintings, graphic sheets, sculptures, and items of applied art tell the story of the life of the Yakut people today.

● N. Shtaprov, "Bayan".

## WHAT'S ON!

May 8-10

## THEATRES

Kremlin Palace of Congresses. 8—Adam, "Giselle", ballet performed by the Bolshoi Theatre. 9, 10—Concerts by the Mosev Ensemble of Folk Dance of the USSR.

Bolshoi Theatre (Sverdlov Sq.). 8 (mat)—Concert by young Bolshoi soloists; 8 (eve)—Khrennikov, "Love for Love" (ballet); 9 (mat)—Molchanov, "Dawn Here Are Quiet" (opera); 9 (eve)—Bshpal, "The Angora" (ballet).

Stanislavsky and Nemirovich-Danchenko Musical Theatre (17 Pushkinskaya St.). 8—Double bill: Tchaikovsky, "Iolanthe" (opera); Tchaikovsky, "Francesca da Rimini" (ballet); 9 (mat)—Tchaikovsky, "Iolanthe" (opera); 9 (eve)—Double bill: Strauss, "Straussiana"; Khachatryan, "Gayane" (ballet); 10—Tchaikovsky, "The Snow Maiden" (ballet).

Operetta Theatre (6 Pushkinskaya St.). 8 (mat)—Peltman, "The Old Comedy" (8 (eve)—

Ziv, "Messieurs Artistes", Ilyin, "Comrade Lyubshin", Loewe, "My Fair Lady".

## FILMS

Fact (Lithuanian Film Studio). About a tragedy in a Lithuanian village scorched by the Nazis.

At the International Film Festival, actress Vera Lovel was presented by the USSR and diploma for the best female performance.

Cinema (Mirovaya St.). Metro (Pushkinskaya St.).

An adventure film to the subcontinent for the formation of the USSR and the story of its development.

Cinema (Mirovaya St.). Metro (Pushkinskaya St.).

Operetta Theatre (6 Pushkinskaya St.). 8 (mat)—Peltman, "The Old Comedy" (8 (eve)—



## Environmental protection technology on view

The 2nd International Exhibition of Instruments, Equipment and Automatic Systems intended for pollution control and the development of the sources of pollution, which opens in Moscow on May 19, has drawn nearly 70 countries and organizations from 13 countries—including Austria, Bulgaria, Italy, the United States, Poland, France, the FRG, Sweden, Japan, etc.

Many countries are now very active in pollution control. The Soviet Union carries out this

work on a national basis. This country recognizes the natural environment to be the most important element in the material well-being of the people and considers the land, the water, the forests and the wild life to be the heritage of the entire nation.

The USSR State Committee for Hydrometeorology and Monitoring of the Environment is the main agency responsible for pollution control and purity requirement in this country. The

exhibition will make it possible to evaluate environmental technologies available in leading industrial countries. Among the exhibits are computerized pollution monitoring and control stations and systems. Of especial interest are instruments for remote measurements, sampling devices and analytical instruments.

The exhibition will be the first display to be held in Pavilion No. 3 of the exhibition complex in Krasnaya Presnya.

## Contacts and contracts

At the USSR Ministry for Foreign Trade in Moscow, talks on trade for 1982 ended between this country and Bangladesh. A protocol has been signed along with other documents regulating trade relations between the two countries for the current year.

Another meeting of the CMEA's Standing Committee on Cooperation in Ferrous Metallurgy has been held in Bucharest. The Commission determined the procedure and deadlines for the implementation of tasks deriving from the CMEA Executive's resolutions.

An International summer costume goods and foodstuffs fair is now held in Plovdiv, Bulgaria's second largest industrial city, under the slogan: For Better and Business Cooperation. Taking part are over 1,200 enterprises and organizations from 40 countries of all continents. A national day of the USSR was held at the fair.

In Brussels, Belgium and the USSR have signed a cooperation protocol in the field of health protection and medical services, lasting till the end of 1982. It envisages wide-ranging exchanges and joint ventures.

## A SYMPOSIUM OF BRANDY-MAKERS

Visitors attending a symposium which the French group of Remy Martin has held in the International Trade Centre in Moscow in cooperation with V/O Sovnecentr have been told interesting nuances in the manufacture and seasoning of cognac. The French specialists have also demonstrated the best of their products.

In their category, our brandies are the most expensive, said Francois Henard-Debrout, General Director of Remy Martin Group. They are grown in the area of Cognac, in the locality of Petite and Grande Champagne, i.e. in zones where best quality grapes are grown. Therefore, I think that these drinks

would best suit genuine connoisseurs of brandy.

We are pleased to realize that our products are widely known in the Soviet Union where the entire range of Remy Martin drinks is marketed. These include such brands as VSOP, Royal Cognac, Napoleon, and Louis XIV seasoned for more than 30 years. At the moment we would like to increase our deliveries to your country.

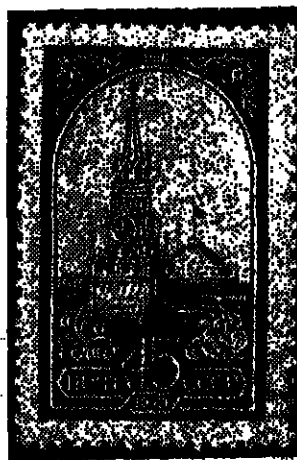
Asked about his attitude to Soviet brandies produced using similar technologies, M. Debrout noted that he had tasted these drinks on many occasions himself and commended their rich bouquet and good quality.

## EXPOCENTR—BURGER UND PARTNER: JOINT PUBLICATION

V/O Expocentr of the USSR Chamber of Commerce and Industry and the West German Burger und Partner company have agreed to jointly issue the magazine "Technoforum". The magazine's editions will be timed to coincide with international shows held in the USSR. It will contain technical and other information from small and medium-size West German companies and will be distributed free among the CMEA organizations.

Presentations have already been held in Moscow of two issues of the magazine prepared for the international exhibitions "Integrah-B2" and "Elektro-B2" to be held in the Soviet capital this summer and fall.

## Philately

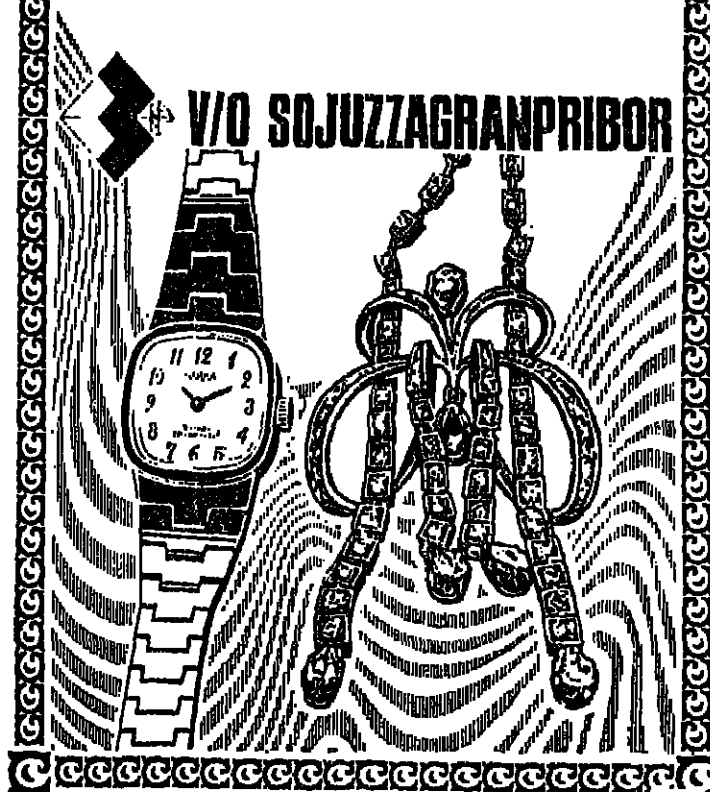


## THE KREMLIN ON A STAMP

The USSR Ministry of Communications has issued a 45-kopek postage stamp offering a view of the Moscow Kremlin. In the foreground is the Kremlin's Spassky Tower and in the background is the dome of the building housing the USSR Council of Ministers. The drawing is enclosed in an ornate frame and graced by Russian ornaments.

WE INVITE YOU TO AN IMPRESSIVE DISPLAY OF DIAMONDS, GOLD AND SILVER JEWELLERY WITH PRECIOUS AND SEMIPRECIOUS STONES, AMBER, WATCHES AND CLOCKS. YOU CAN GET ITEMS OF INTEREST FOR HARD CURRENCY

V/O "Sofuzzagranpribor" Information Commercial Centre 30, Gorkhalsky Per., Moscow, USSR Phone: 280-47-00



IF YOU ARE GOING ON A JOURNEY, WE SINCERELY ADVISE YOU TO TRAVEL VIA SOVIET RAIL

Soviet trains take the discomfort out of rail travel. You will relax in a cozy well-equipped compartment, looked after by attentive attendants. In the restaurant car you can become acquainted with Russian cuisine while you travel through the wide expanses of the Soviet Union. The journey will be easy and you will alight at your destination refreshed and invigorated.

May we also remind you that your travelling expenses will be minimal, since rail is the cheapest form of transport. Groups of 10 or more people get a discount. Tourist groups from England, Belgium, Holland, France, the FRG, Italy, Switzerland, Austria, Greece, Denmark, Norway, Sweden, Turkey and Finland are provided by Soviet Railways with a 25-60 per cent discount of the fare.

Tickets are available from travel agencies, tourist offices or direct from the station. You can book a return ticket too. Sleepers can be reserved in advance.

Travel agencies or railway information offices will be happy to provide you with any information you need. Book now! We wish you a happy journey!

SOVIET RAILWAYS



Handwritten text in a box: "Soviet Railways"